REMARKS

Claims 1-24 are pending in the application

Claims 7-11 and 19-23 are found to be allowable.

Independent claims 1 and 13 have been deleted herein.

Claims 3-11 and 15-24 are objected to for minor informalities. The noted informalities have been corrected.

With regard to claims 21 and 22, claim 21 recites cos-squared filter whereas claims 22 recites cos filter.

Claims 1-3, 5, 12-15, and 24 stand rejected under 35 U.S.C. §102(e) as being anticipated by Rudolph et al. (6,501,804) (Rudolph).

Claims 4, 6, 16, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rudolph noted above.

Claims 2-6, 12, 14-16, 18, and 24 are being herein respectfully traversed for at least the following reasons:

Regarding independent claims 2 and 14:

Its asserted in the Office Action that col.1, line 61-col.2, line 5 and Fig. 2a of Rudolph describes periodically inserting a zero-point into a signal on a transmission side as specifically recited in the claimed invention. In particular that the Office Action points to Rudolph's description of test sequences lying on a zero line of the x-axis are inserted in the signal to be transmitted to the receiver.

However, Rudolph. describes in col.1, lines 65-67 that the test sequence is in the form of a pseudo-random sequence which is sufficiently long and has no direct component.

In addition Rudolph recites in claim 1 that the test sequence (T) and the modulated digital signals (D) are transmitted in a periodic alternating fashion, the test sequence is averaged at a receiver end so as to detect a noise carrier, and the noise carrier is subtracted from the demodulated digital signals at the receiver end.

Therefore, the test sequence of Rudolph requires a time interval for the averaging described in Rudolph.

This is in contrast to the claimed invention where a zero-point periodically inserted into a signal on a transmission side i.e. instantaneous point requiring no time interval.

In applicant's independent claims 2 or 14, a zero- point is periodically inserted into a signal, a noise component is interpolated from a received signal by using the zero-point, and the noise component is subtracted from the received signal.

Therefore applicant's claimed invention is different because the test sequence of Rudolph requires a time interval for the averaging, in contrast to applicant with instantaneous point requiring no time interval.

Additionally, no direct component given by the test sequence of Rudolph is not pure zero, but the zero-point of the present claimed invention is pure zero so that the present invention can detect a noise purer than the test sequence of Rudolph.

Accordingly, it is respectfully submitted that independent claims 2 and 14 are patentable over Rudolph under 35 U.S.C.§102(e).

Regarding dependent claims 3-6, 12, 15-16, 18, and 24:

It is respectfully submitted that these dependent claims are patentable over Rudolph not only under 35 U.S.C.§102(e) but also under 35 U.S.C. §103(a) at least because of their direct or indirect dependency from independent claim 2 or 14 patentable as noted above.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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